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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/731,721 | 12/08/2003 | Keith Dobie | 7385 | 5478 |

30780 7590 04/07/2005

LAW OFFICES OF JOHN P. MCGONAGLE
800 HINGHAM STREET - 2N
ROCKLAND, MA 02370

EXAMINER

PRINCE, FRED G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1724

DATE MAILED: 04/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,721

Applicant(s)

DOBIE ET AL.

Examiner

Fred Prince

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the instant drawings contain lines, numbers, and letters not uniformly thick and well-defined. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Allowable Subject Matter

2. Claims 1-16 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

Per claim 1, while it is known in the art to provide an anoxic pretreatment tank adapted to receive sewage having a mixture of solids and liquids, wherein said sewage within said anoxic tank separates into a sludge layer, a scum layer, and a liquid effluent layer between said sludge layer and said scum layer, wherein said anoxic tank is adapted to provide some effluent denitrification (see US Pat No 6,299,774 to Ainsworth et al.), and it is known in the art to provide a granular fixed film denitrification reactor connected to an anoxic tank, said denitrification reactor being adapted to denitrify a liquid effluent and provide some biochemical oxygen demand (BOD) removal from said effluent, and a membrane bioreactor connected to said denitrification reactor, said

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membrane bioreactor adapted to provide ultra and micro filtration of a denitrified effluent, retain biomass for BOD removal and nitrification, wherein said anoxic tank effluent is passed from the anoxic tank to the denitrification reactor for denitrification, wherein a denitrified effluent is passed from the denitrification reactor to the membrane bioreactor for filtration (see US Pat No 6,692,642 to Josse et al.), in the examiner's opinion, the prior art fails to teach or render obvious combining the known teachings in such a way that the anoxic tank is adapted to receive raw untreated sewage with an expectation of acceptable functioning. Accordingly, a system utilizing an anoxic tank adapted for receiving raw untreated sewage would fall outside the scope of the instant invention. The instant invention eliminates the need for treatment of the sewage prior to being fed to the anoxic tank.

Per claim 11, while it is known in the art to provide raw waste untreated solids and liquids into sewage having a mixture of an anoxic tank (see US pat No 4,824,563 to Iwahori et al.), and it is known to provide the step of separating said untreated sewage into a sludge layer, a scum layer, and a liquid effluent layer between said sludge layer and said scum layer (see US Pat No 6,299,774 to Ainsworth et al.), and passing said liquid effluent into a denitrification reactor, filtering and denitrifying said liquid effluent to form a denitrified effluent, gathering said denitrified effluent into a sump, discharging said denitrified effluent into a bioreactor for nitrification ('563 to Iwahori et al.), and it is known to provide a membrane bioreactor, pooling said denitrified effluent within said bioreactor, nitrifying said denitrified effluent, drawing said nitrified effluent through a membrane pack and micro filtering said nitrified effluent to form a micro filtered effluent,

('642 to Josse et al.), in the examiner's opinion, the prior art fails to teach or fairly suggest combining the known elements with discharging said micro filtered effluent into a pump basin. The instant invention eliminates the need for treatment of the sewage prior to being fed to the anoxic tank.

Conclusion

4. This application is in condition for allowance except for the following formal matters:

Drawings as noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.


A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (571) 272-1165. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Fred Prince
Primary Examiner
Art Unit 1724

fgp
3/30/05